

<b>Company</b>			
	<b>A Organizational Excellence</b>	<b>B Connectors</b>	<b>C Business Performance</b>
<b>1</b>	<b>Vision/Mission</b>	<b>Human Resources</b>	<b>The Products</b>
<b>2</b>	<b>Governance</b>	<b>The Plan</b>	<b>The Market</b>
<b>3</b>	<b>Intellectual Capital</b>	<b>Production Practices</b>	<b>The Competition</b>

**FIG. 1(a)**

<b>R&amp;D Organization</b>			
	<b>A Setting the Stage</b>	<b>B Undertaking the Task</b>	<b>C Making the Impact</b>
<b>1</b>	<b>Vision Mission Mandate</b>	<b>Business Relevance</b>	<b>Technology Acquisition/ Transfer</b>
<b>2</b>	<b>Human Resources</b>	<b>Program Management</b>	<b>Corporate Impact</b>
<b>3</b>	<b>Lifelong Learning</b>	<b>Performance Measurement</b>	<b>Public/ Community Impact</b>

**FIG. 1(b)**

<b>University</b>			
	<b>A Undergraduate Programs</b>	<b>B Graduate And Research Programs</b>	<b>C External Linkages</b>
<b>1</b>	<b>Undergraduate Curriculum</b>	<b>Graduate Program</b>	<b>Links Within The University</b>
<b>2</b>	<b>Undergraduate Student Relations</b>	<b>Research Program</b>	<b>Links To Other National And International Institutions</b>
<b>3</b>	<b>Staff Development</b>	<b>Research Support</b>	<b>Links To Industry And The Community</b>

**FIG. 1(c)**

Technical Asset			
	A Scientific Strength	B Technological Strength	C Commercial Strength
1	Technical Framework	Commercial Readiness	Market Characteristics
2	Level of Verification	Proprietary Strength	Margin and Profit Potential
3	Excellence of Project Team	Technological Durability	Commercialization Channels

FIG. 1(d)

Performance Area	Performance Criteria	Rating Level A	Rating Level B	Rating Level C	Rating Level D	X	Y
Proprietary Strength	1 Patents	Patent protection on the technology is not planned and/or is not feasible.	Patent disclosures and/or applications have been or could be prepared, but it is uncertain whether there is sufficient novelty to support strong claims.	Patent applications have been submitted to the US and/or other appropriate patent offices. The principal claims are viewed as strong and acceptance by the patent offices is anticipated.	The technology is well protected by strong process and/or product patents, with extensive geographic coverage.	a	1-a
	2. Intellectual Property	There is a dominant IP position in this field held by other parties.	The technology is in a competitive environment with essentially no significant IP position likely to be held by any party.	The technology is in an active field but appears to have the potential to fill a significant IP gap.	The technology is in a relatively virgin field with ample opportunities for strong IP protection.	b	1-b
	3 Trademarks	The technology will not have any specific trademark designation and the marketing approach will have to rely on the intrinsic value of the technology.	Although a distinguishing trademark for the technology is not feasible, it belongs to a family of well-recognized commercial products or services and will benefit from this association.	Attaining a distinguishable trademark for the technology is feasible and should facilitate market introduction.	The technology has its own distinguishable trademark that will significantly increase market acceptability.	c	1-c
	Know-how	No specific know-how is required to commercialize the technology, or if required, has been publicly disclosed.	Some specific, but not overly complex, know-how is required to commercialize the technology. Actions such as confidentiality agreements will be needed to maintain a proprietary advantage.	The technology as publicly disclosed will be difficult to apply commercially without the know-how of the developers.	The technology requires a high level of know-how in its application and it will be almost impossible to apply commercially without this knowledge.	d	1-d
	Technological Improvements	Gradual improvements to the technology will probably occur through further development, which may extend its life but unlikely its application or market share.	Gradual improvements to the technology will probably occur through further development and these should extend its application and market share.	The technology is at an early point in the maturity curve and significant improvements are likely which will have major business impacts.	The technology is at an early point in the maturity curve and significant improvements are likely which will have major business impacts. There is a high probability of valuable additional intellectual property protection.	e	1-e
						Sum X	Sum Y

**FIG. 2**

Criteria	Letter Rating	Number Rating	X Wt.	Y Wt.	X	Y
1	B	1	0.0	1.0	0.0	1.0
2	D	3	0.0	1.0	0.0	3.0
3	C	2	0.0	1.0	0.0	2.0
4	A	0	0.2	0.8	0.0	0.0
5	B	1	0.0	1.0	0.0	1.0
6	A	0	0.2	0.8	0.0	0.0
7	B	1	0.2	0.8	0.2	0.8
8	C	2	0.0	1.0	0.0	2.0
9	B	1	0.2	0.8	0.2	0.8
10	B	1	0.2	0.8	0.2	0.8
11	B	1	0.5	0.5	0.5	0.5
12	A	0	0.2	0.8	0.0	0.0
13	B	1	0.2	0.8	0.2	0.8
14	C	2	0.8	0.2	1.6	0.4
15	C	2	0.8	0.2	1.6	0.4
16	C	2	1.0	0.0	2.0	0.0
17	B	1	0.2	0.8	0.2	0.8
18	D	3	0.5	0.5	1.5	1.5
19	B	1	0.8	0.2	0.8	0.2
20	B	1	0.2	0.8	0.2	0.8
21	C	2	0.2	0.8	0.4	1.6
22	D	3	0.2	0.8	0.6	2.4
23	C	2	0.2	0.8	0.4	1.6
24	B	1	1.0	0.0	1.0	0.0
25	B	1	1.0	0.0	1.0	0.0
26	C	2	1.0	0.0	2.0	0.0
27	B	1	1.0	0.0	1.0	0.0
28	C	2	0.8	0.2	1.6	0.4
29	B	1	0.2	0.8	0.2	0.8
30	B	1	0.8	0.2	0.8	0.2
31	C	2	1.0	0.0	2.0	0.0
32	C	2	1.0	0.0	2.0	0.0
33	B	1	1.0	0.0	1.0	0.0
34	B	1	1.0	0.0	1.0	0.0
35	A	0	1.0	0.0	0.0	0.0
36	A	0	1.0	0.0	0.0	0.0
37	B	1	0.8	0.2	0.8	0.2
Total			19.4	17.6	25.0	24.0

FIG. 3

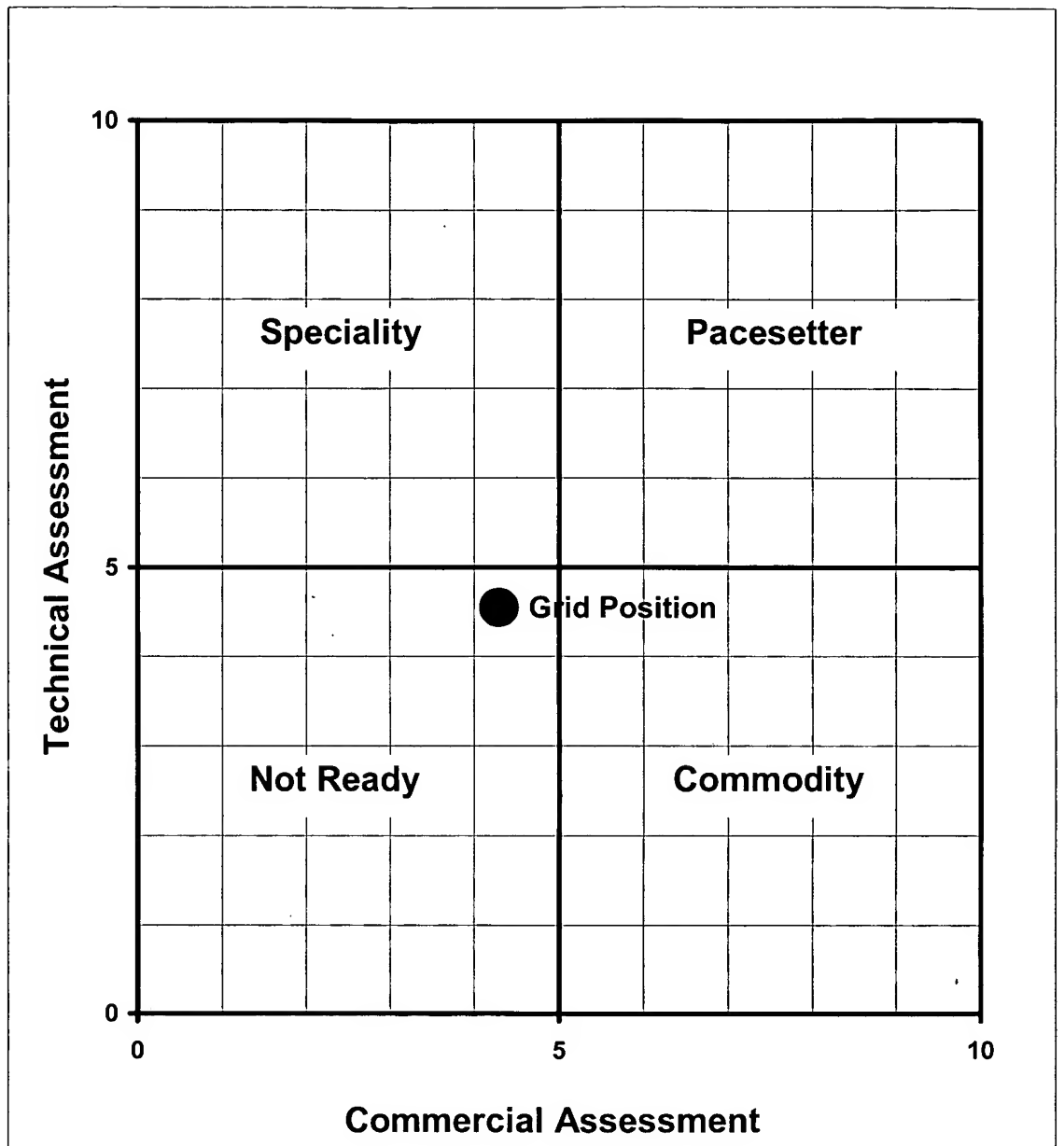


Fig. 4(a)

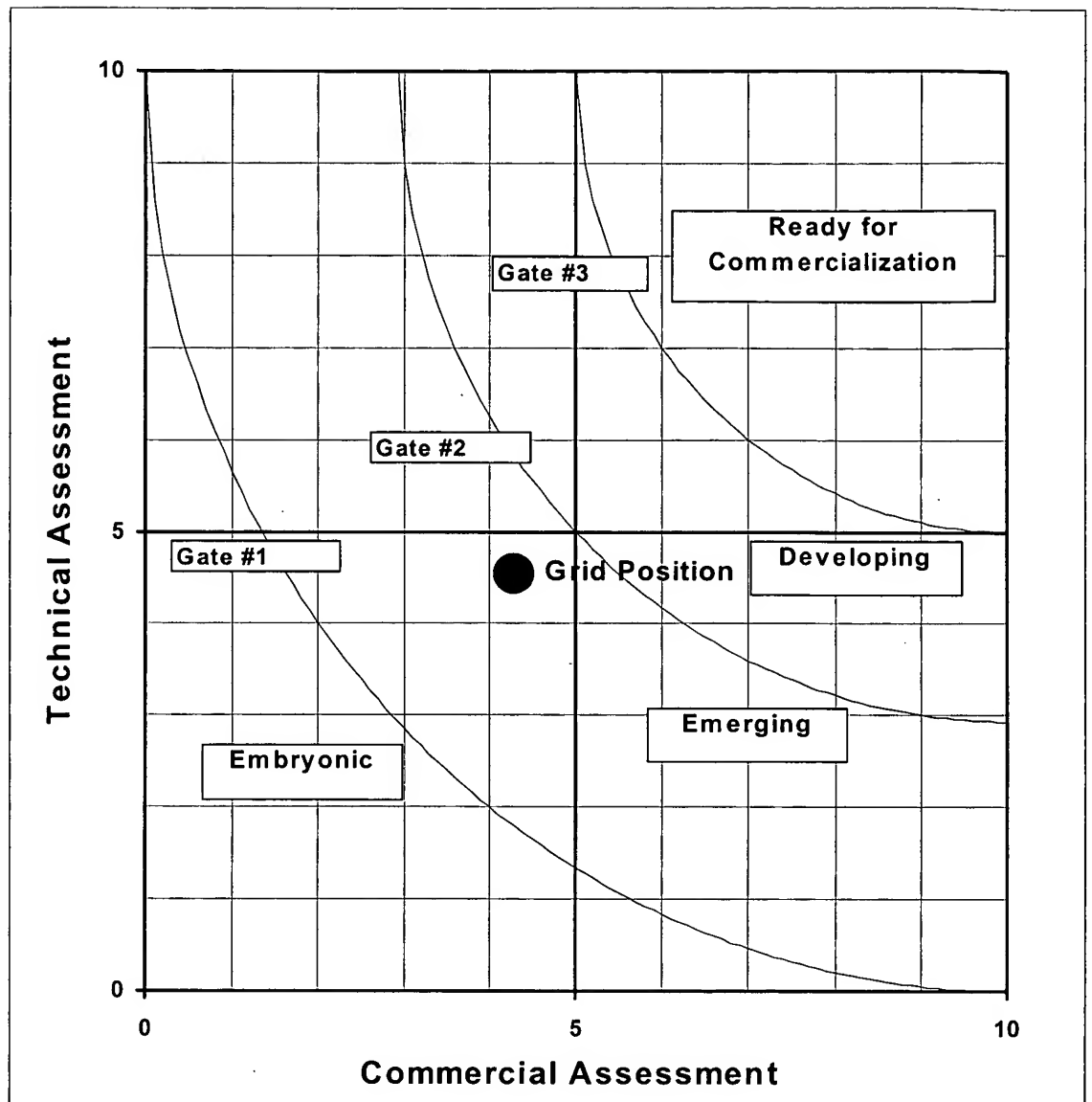


Fig. 4(b)



<b>Tech. #</b>	<b>X</b>	<b>Y</b>	<b>R</b>
7	7.4	7.6	75.0%
10	6.9	7.9	73.5%
8	6.4	7.6	69.4%
3	7.2	5.9	64.9%
9	5.2	7.0	60.0%
1	6.7	5.3	59.4%
6	6.7	5.2	58.8%
4	6.0	5.5	57.4%
2	4.8	4.4	46.0%
5	2.9	3.1	30.0%

**Fig. 5**

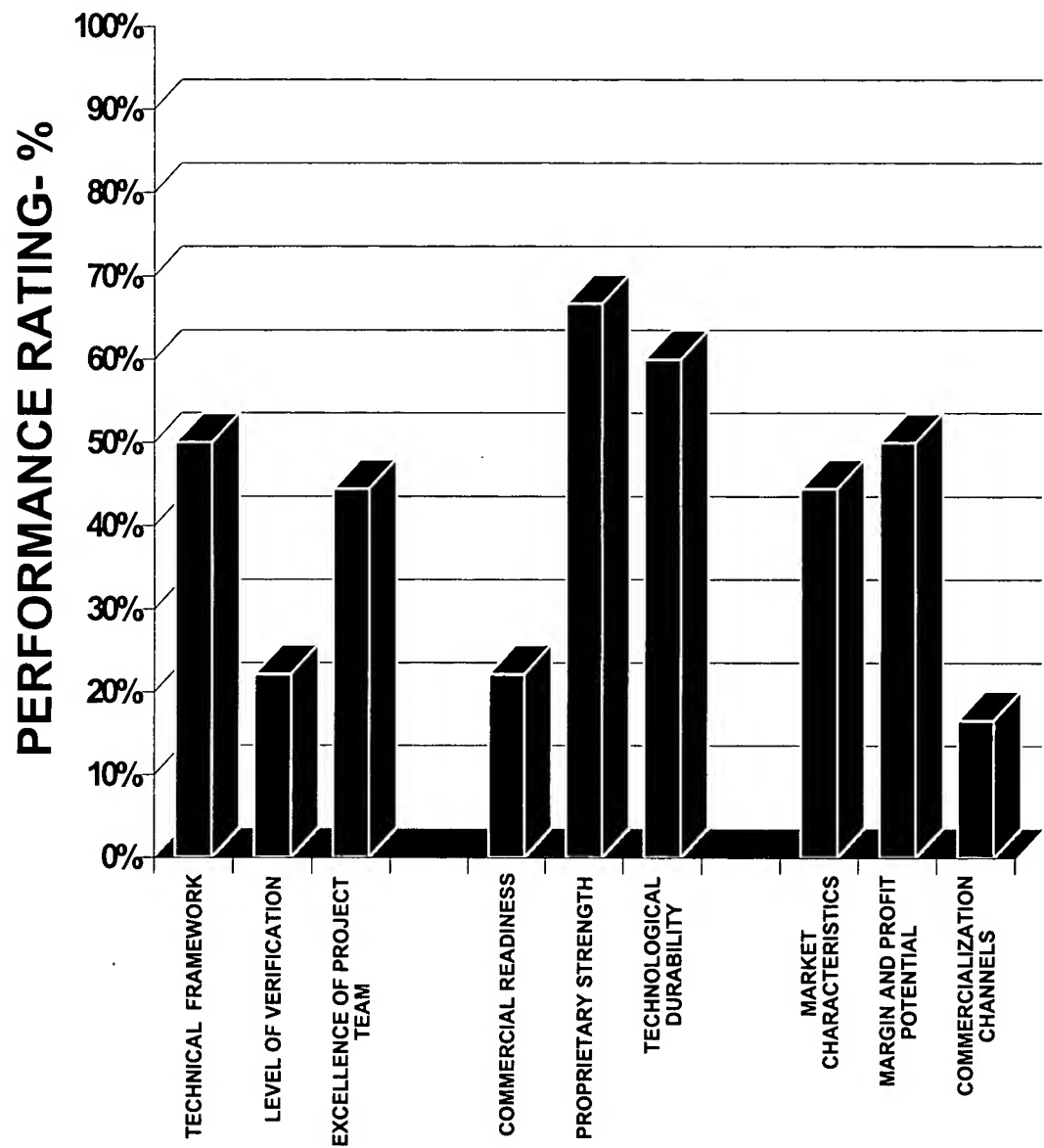


Fig. 6

**Pro-Grid - [Application Entry Form v1.2]**

File Edit View Insert Format Records Tools Window Help

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Application No.  Application Status  *New - Not processed*

Applicant Name  Title of Proposal

Organization  Theme

Org. Department

Dollars Req.

Address

City  Prov

Postal Code

Telephone  Fax

E-Mail

☒ Print Applications

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**Applicant Evaluation**

Statement 1  Statement 5

Statement 2  Statement 6

Statement 3  Statement 7

Statement 4

**Reviewer Evaluation**

Reviewer Name:  Code:

Statement 1  Statement 5

Statement 2  Statement 6

Statement 3  Statement 7

Statement 4

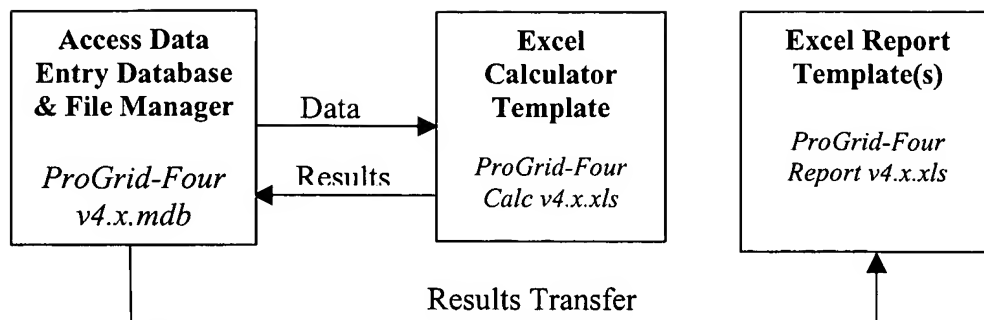
Record:     1 of 6

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Record:     1 of 4

Form View

FIG. 7



**FIG. 8(a)**

**ProGrid-R&D Demo v1.6.1** [ ] [ ] [X]

### Input Project/Proposal Information

Name of Evaluator	Dr. Roger Smith	
Proposal/Project	New gasoline additive	
Summary or Critique of the Project	A new additive has been discovered which when added to gasoline reduces toxic emissions. <div style="text-align: right;"> <input type="button" value="Up"/> <input type="button" value="Down"/> </div>	

**On the next three screens you are asked to assess the Project/Proposal using the performance criteria in the ProGrid-R&D Demo Performance Matrix shown below. To select one of the four Language Ladder statements (A to D) that you believe best describes the Project/Proposal, click on the button beside that statement. If all aspects of a particular statement are not fully met, then select the statement immediately preceding it, e.g., if all the characteristics of a D statement have not been met, then select the C statement. Review your assessment again to see if all the characteristics for the statement that you have selected have been met.**

Quality of the Project	Connecting Factors	Benefits/Impacts
The Advance	Project Plan	Technology Transfer
The Researchers	Capacity	Direct Benefits
Validation	Collaboration	Indirect Benefits

**FIG. 8(b)**

<b>The Advance</b> <input type="radio"/> A) Will contribute to knowledge in the field of investigation. <input type="radio"/> B) Will extend the boundaries of knowledge in the field of investigation in a significant way. <input checked="" type="radio"/> C) Will lead to major defined advances in the field of investigation. <input type="radio"/> D) Will lead to advances of "breakthrough" stature.
<b>The Researchers</b> <input type="radio"/> A) The Researchers have contributed to their field of investigation. <input checked="" type="radio"/> B) The Researchers have undertaken innovative studies that have received national recognition. <input type="radio"/> C) The Researchers have made major advances and are recognized internationally as among the leaders in their field. <input type="radio"/> D) The Researchers have achieved advances of breakthrough stature and are recognized internationally as pioneers.
<b>Validation</b> <input checked="" type="radio"/> A) The concept on which the Proposal is based has had only a limited level of testing. <input type="radio"/> B) The concept on which the Proposal is based has been tested under a selected range of conditions. <input type="radio"/> C) The concept on which the Proposal is based has been validated under a range of conditions with external confirmation. <input type="radio"/> D) The concept on which the Proposal is based has been fully validated as an integrated system under all relevant conditions.
<div><input type="button" value=" &lt; Back"/><input type="button" value=" Next &gt;"/><input type="button" value=" Quit"/></div>

FIG. 8(c)

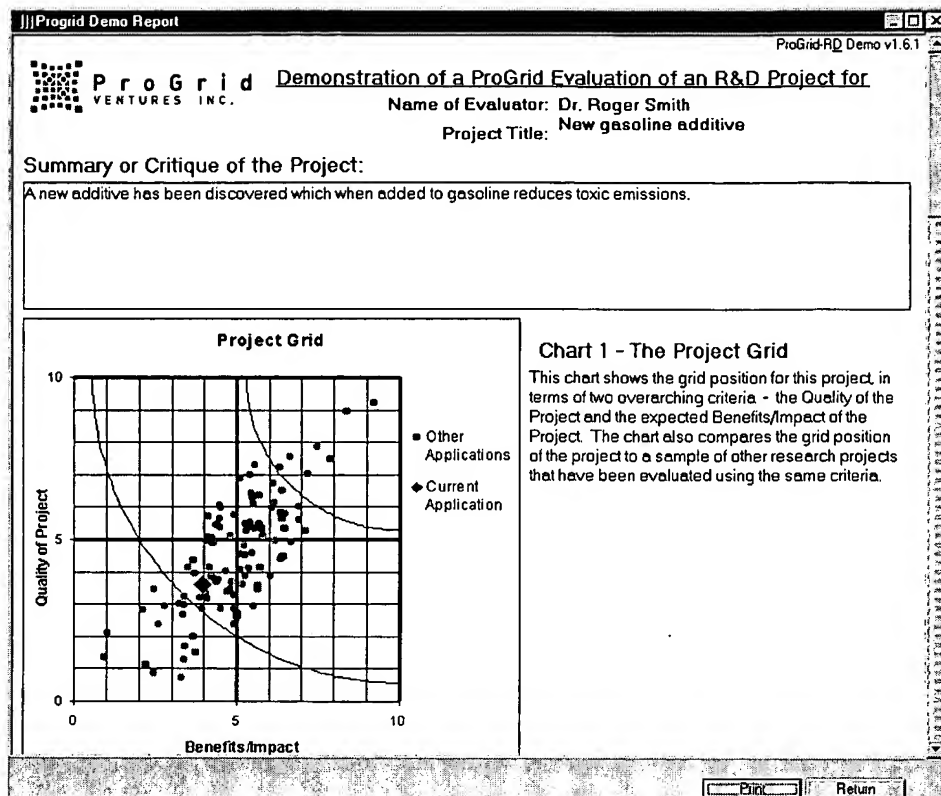


FIG. 8(d)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
No.	L	R	Xwt	Ywt	X	Y	No.	MS	Xwt	Ywt	X	Y	No.	R	code	MS		
1	B	1	0	1	0	1	1	2	0	1	0	2	1	1	2	1	1	2
2	B	1	0	1	0	1	2	2	0	1	0	2	2	1	0	1	0	2
3	C	2	0	1	0	2	3	2	0	1	0	2	3	2	0	1	0	2
4	C	2	0.2	0.8	0.4	1.6	4	2	0.2	0.8	0.4	1.6	4	2	2	1	0	2
5	B	1	0	1	0	1	5	3	0	1	0	3	5	1	3	2	1	3
6	A	0	0.2	0.8	0	0	6	3	0.2	0.8	0.6	2.4	6	0	3	2	1	3
7	A	0	0.2	0.8	0	0	7	3	0.2	0.8	0.6	2.4	7	0	3	2	1	3
8	B	1	0	1	0	1	8	2	0	1	0	2	8	1	2	1	0	2
9	B	1	0.2	0.8	0.2	0.8	9	2	0.2	0.8	0.4	1.6	9	1	1	1	0	2
10	B	1	0.2	0.8	0.2	0.8	10	2	0.2	0.8	0.4	1.6	10	1	1	1	1	2
11	B	1	0.5	0.5	0.5	0.5	11	3	0.5	0.5	1.5	1.5	11	1	3	2	1	3
12	B	1	0.2	0.8	0.2	0.8	12	3	0.2	0.8	0.6	2.4	12	1	3	2	1	3
13	A	0	0.2	0.8	0	0	13	1	0.2	0.8	0.2	0.8	13	0	1	1	1	1
14	B	1	0.8	0.2	0.8	0.2	14	2	0.8	0.2	1.6	0.4	14	1	0	1	1	2
15	A	0	1	0	0	0	15	0	1	0	0	0	15	0	0	0	1	0
16	D	3	0.2	0.8	0.6	2.4	16	3	0.2	0.8	0.6	2.4	16	3	0	0	0	3
17	D	3	0.2	0.8	0.6	2.4	17	3	0.2	0.8	0.6	2.4	17	3	0	1	0	3
18	C	2	0.8	0.2	1.6	0.4	18	3	0.8	0.2	2.4	0.6	18	2	0	1	1	3
19	B	1	0.2	0.8	0.2	0.8	19	1	0.2	0.8	0.2	0.8	19	1	0	0	0	1
20	B	1	0.2	0.8	0.2	0.8	20	2	0.2	0.8	0.4	1.6	20	1	1	1	0	2
21	B	1	0.2	0.8	0.2	0.8	21	2	0.2	0.8	0.4	1.6	21	1	1	1	1	2
22	B	1	1	0	1	0	22	2	1	0	2	0	22	1	1	1	0	2
23	B	1	1	0	1	0	23	2	1	0	2	0	23	1	1	1	1	2
24	B	1	1	0	1	0	24	1	1	0	1	0	24	1	0	0	0	1
25	C	2	0.8	0.2	1.6	0.4	25	2	0.8	0.2	1.6	0.4	25	2	1	1	0	2
26	C	2	0.2	0.8	0.4	1.6	26	2	0.2	0.8	0.4	1.6	26	2	0	0	0	2
27	B	1	0.8	0.2	0.8	0.2	27	1	0.8	0.2	0.8	0.2	27	1	0	0	0	1
28	C	2	1	0	2	0	28	2	1	0	2	0	28	2	0	0	0	2
29	C	2	1	0	2	0	29	2	1	0	2	0	29	2	0	0	0	2
30	A	0	1	0	0	0	30	0	1	0	0	0	30	0	0	0	0	0
31	C	2	1	0	2	0	31	3	1	0	3	0	31	2	1	1	1	3
32	B	1	0.8	0.2	0.8	0.2	32	3	0.8	0.2	2.4	0.6	32	1	1	2	1	3
33	C	2	1	0	2	0	33	2	1	0	2	0	33	2	0	1	0	2
34	B	1	0.8	0.2	0.8	0.2	34	2	0.8	0.2	1.6	0.4	34	1	0	1	1	2

SUM		16.9	17.1	21.1	20.9		16.9	17.1	31.7	38.3
			Current Position					Future Position		
TOTAL	X=	21.1	X Plot = 4.2			X=	31.7	X Plot = 6.3		
TOTAL	Y=	20.9	Y Plot = 4.1			Y=	38.3	Y Plot = 7.5		
			Current				Future			
TECHNICAL FRAMEWORK			0.5			0.67				
LEVEL OF VERIFICATION			0.11			1				
EXCELLENCE OF PROJECT TEAM			0.33			0.67				
COMMERCIAL READINESS			0.22			0.78				
PROPRIETARY STRENGTH			0.58			0.67				
TECHNOLOGICAL DURABILITY			0.42			0.67				
MARKET CHARACTERISTICS			0.47			0.6				
MARGIN AND PROFIT POTENTIAL			0.42			0.42				
COMMERCIALIZATION CHANNELS			0.5			0.83				

Fig. 9



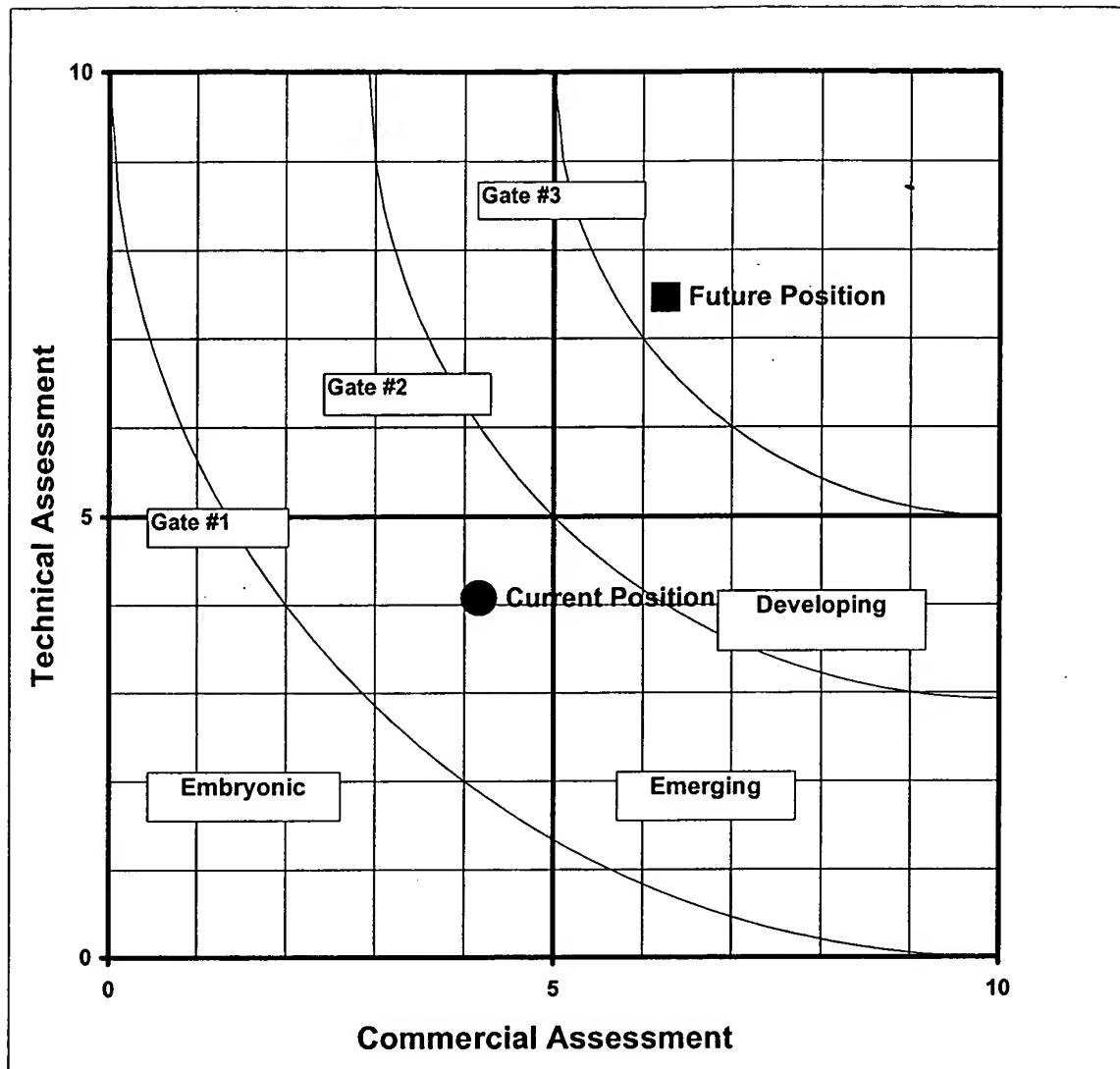


Fig. 10

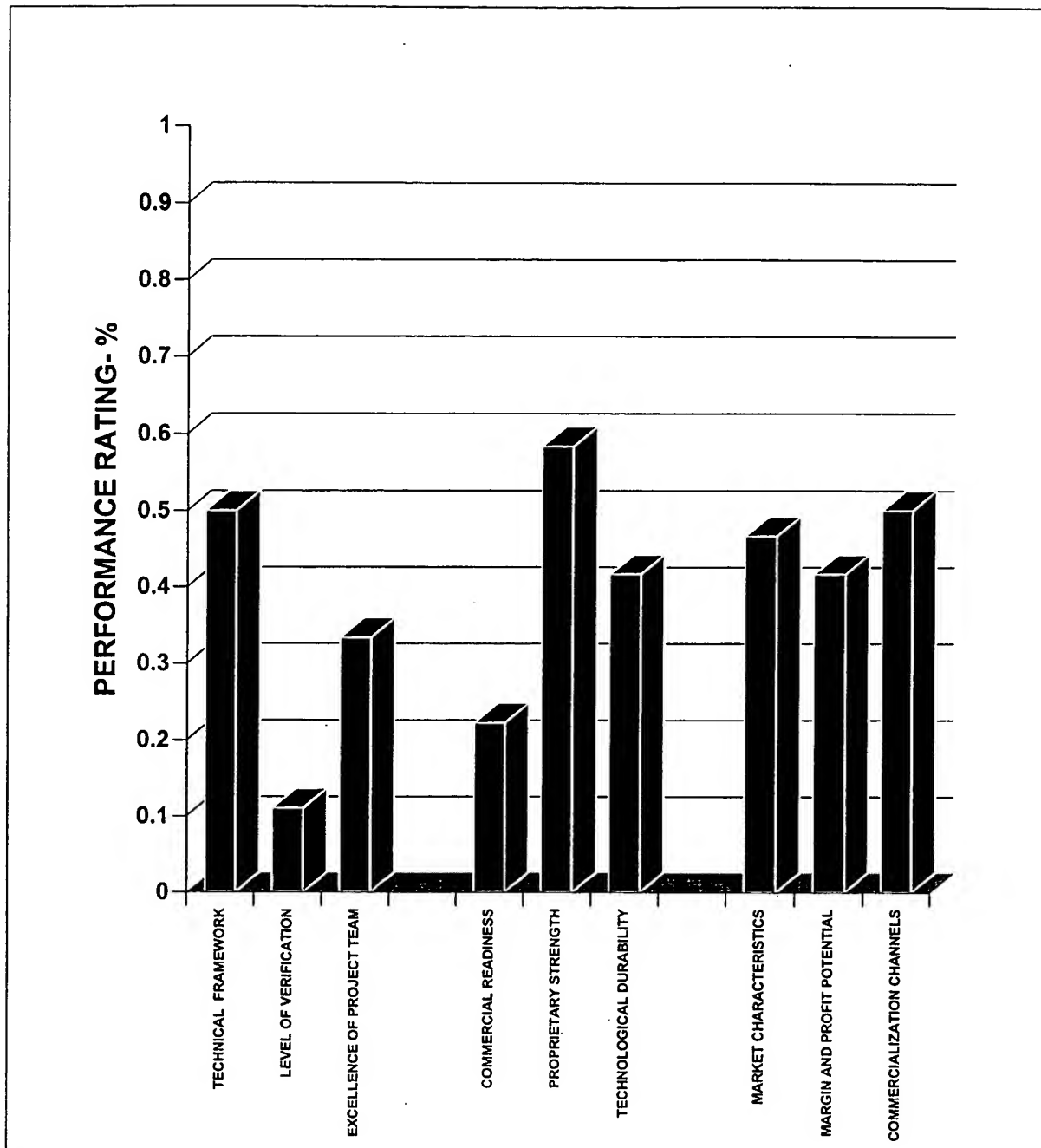


Fig. 11

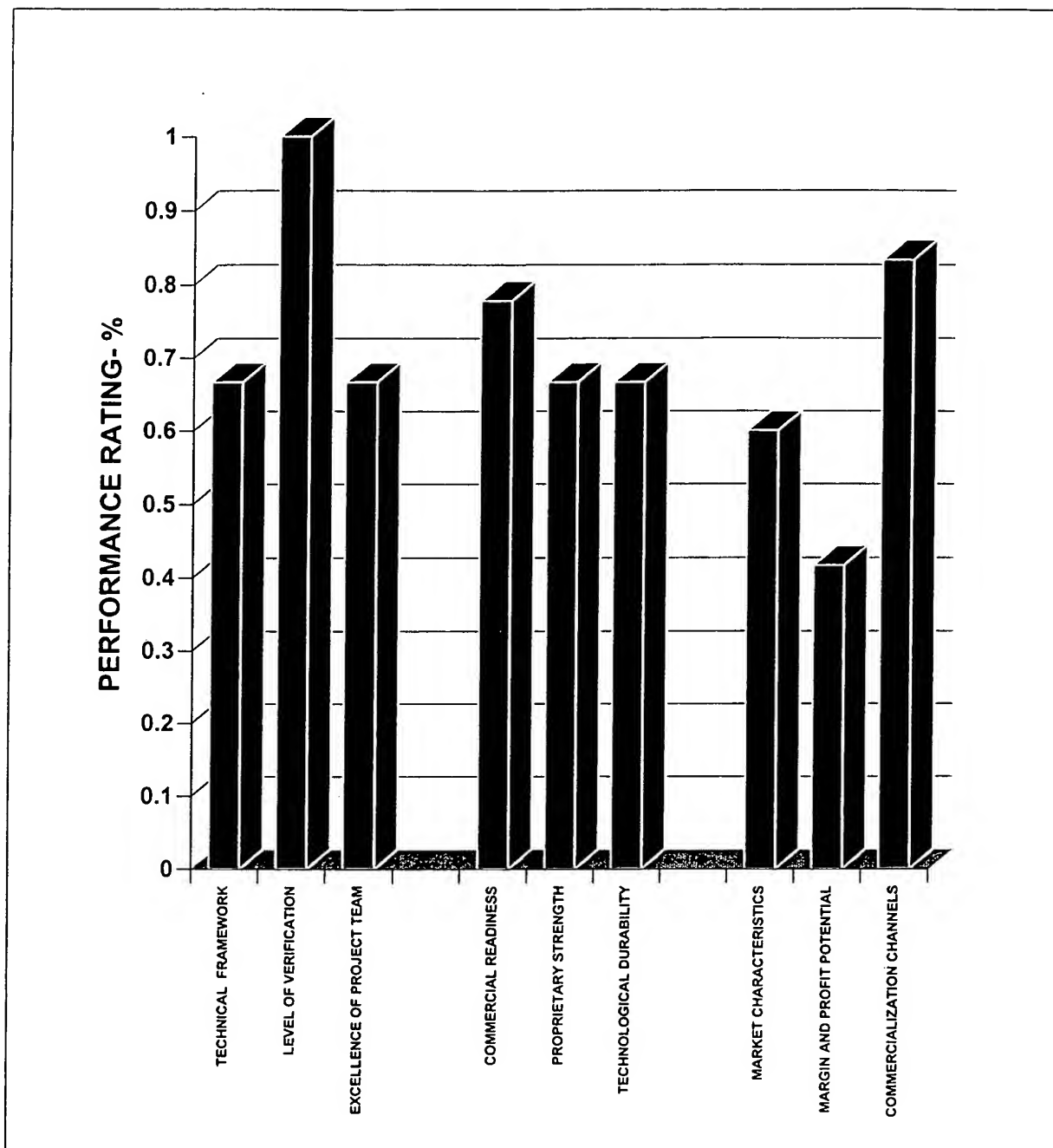


Fig. 12

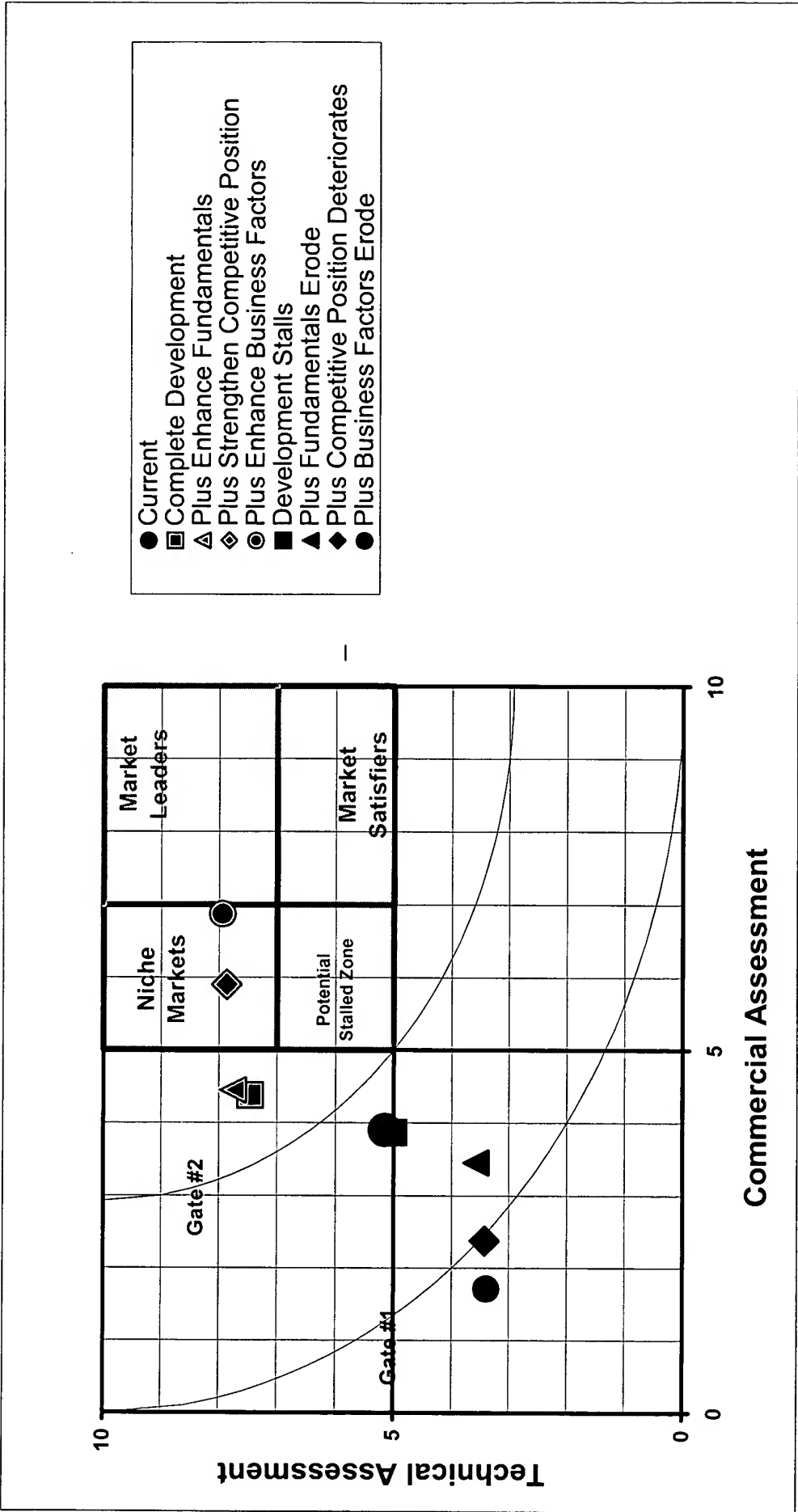


FIG 12(a)

### Level Zero Matrix

<b>A</b> <b>Organizational Excellence</b>	<b>B</b> <b>The Enablers</b>	<b>C</b> <b>Business Performance</b>
Vision/Mission	Human Resources	The Products
Governance	The Plan	The Market
Intellectual Capital	Production Practices	The Competition

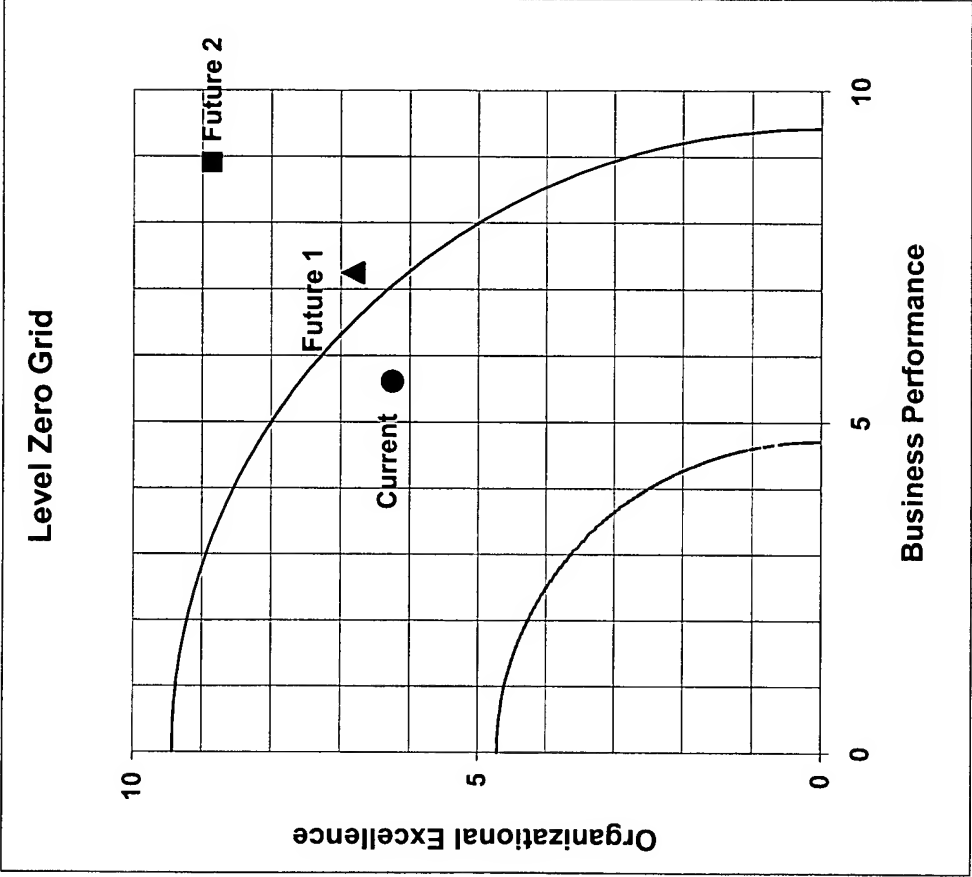
### Level One Matrix

<b>Governance</b>		
<b>Internal Leadership</b>	<b>The Enablers</b>	<b>External Impact</b>
Board of Directors	Organization Structure	Industry Relations
Stakeholders	Audit and Evaluation	Public Relations
Senior Management	Succession and Sustaining	Regulatory and Environmental

### Level Two Matrix

<b>Board of Directors</b>		
<b>Composition</b>	<b>Roles/Processes</b>	<b>Impact</b>
Related Experience	Policy	Internal Impact
Achievements	Planning	External Impact
Balance (Internal/External)	Performance	Strategic Impact
Board Participation	Personnel	

**Figure 13**



**FIG. 14**

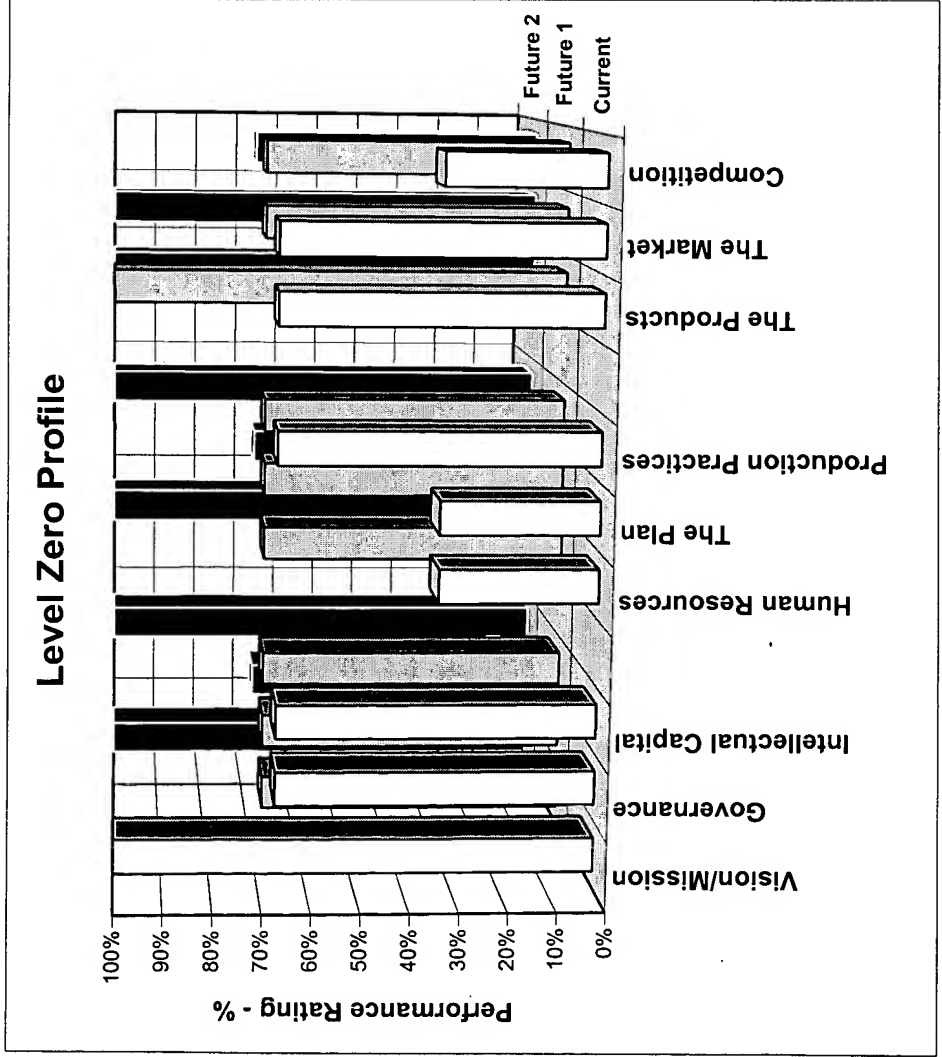


FIG. 15

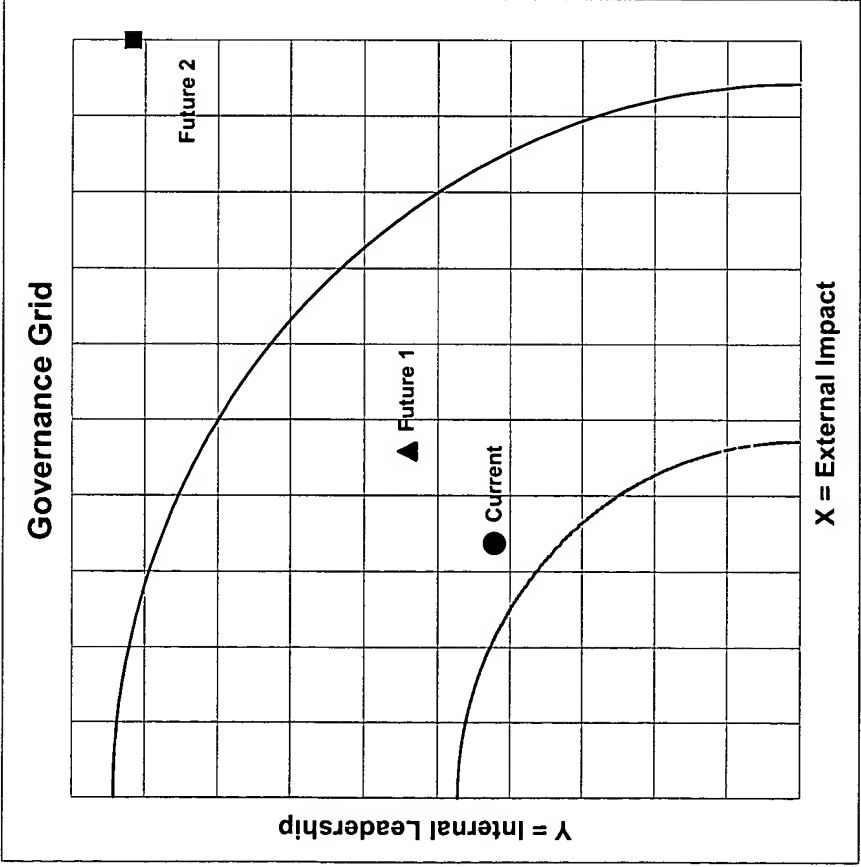
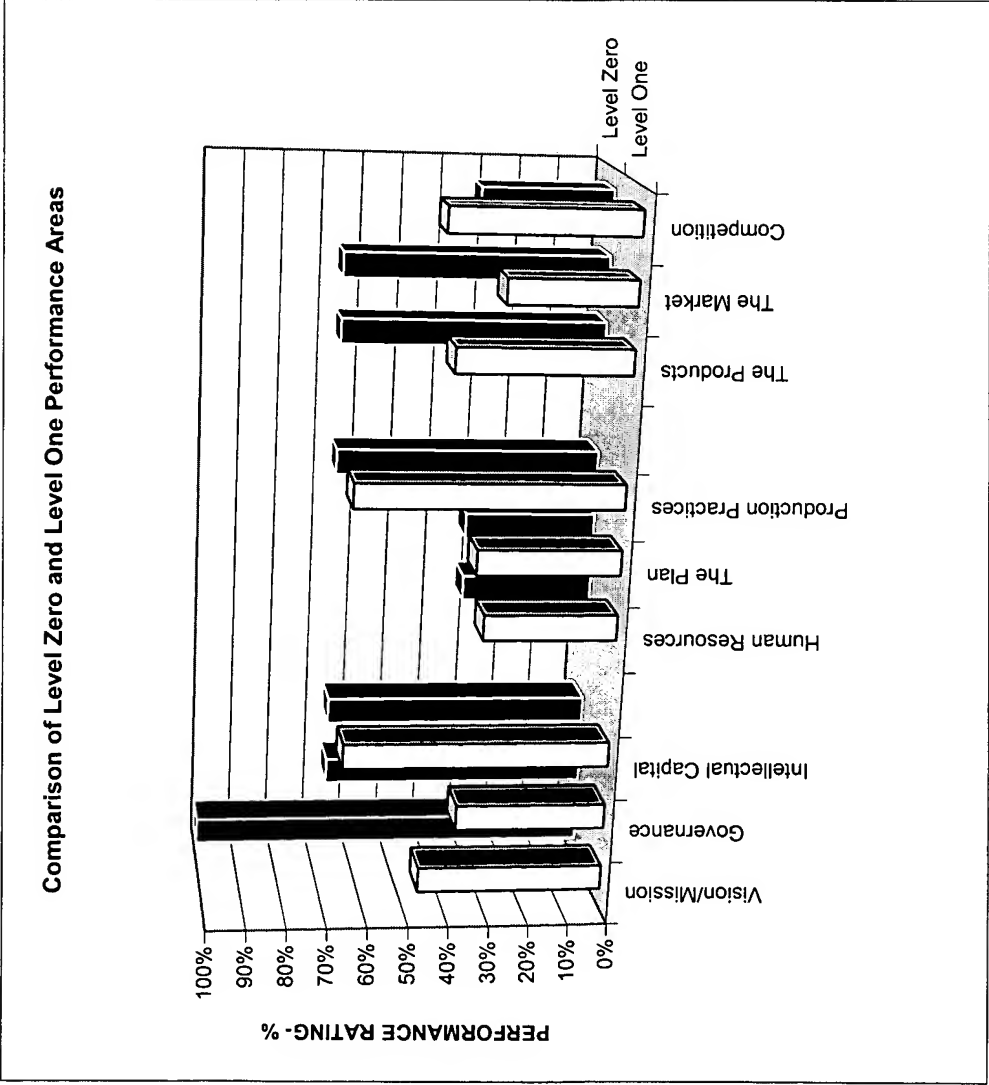


FIG. 16





**FIG. 17**

1	2	3	4	5	6	7	8
	Xcell	Ycell	R	Xwt	Ywt	Xorg	Yorg
Vision/Mission	4.7	4.7	0.47	0.2	0.8	0.093	0.373
Governance	3.4	4.2	0.38	0.05	0.95	0.019	0.359
Intellectual Capital	7.1	6.3	0.66	0.3	0.7	0.199	0.465
Human Resources	3.3	3.3	0.33	0.2	0.8	0.067	0.267
The Plan	4.7	2.7	0.36	0.5	0.5	0.179	0.179
Production Practice	6.1	7.2	0.66	0.7	0.3	0.463	0.199
The Products	5.0	3.8	0.43	0.8	0.2	0.347	0.087
The Market	3.8	2.7	0.32	0.9	0.1	0.287	0.032
Competition	4.7	4.7	0.47	0.95	0.05	0.443	0.023
SUM				4.60	4.40	2.10	1.98
X Plot	4.56						
Y Plot	4.51						

FIG. 18

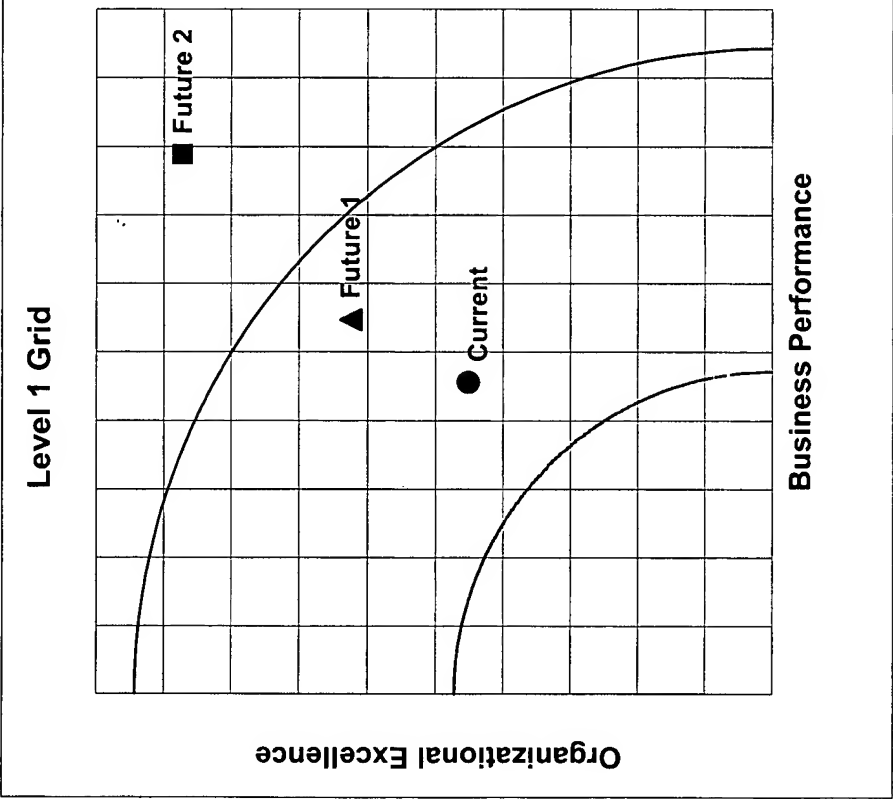


FIG. 19

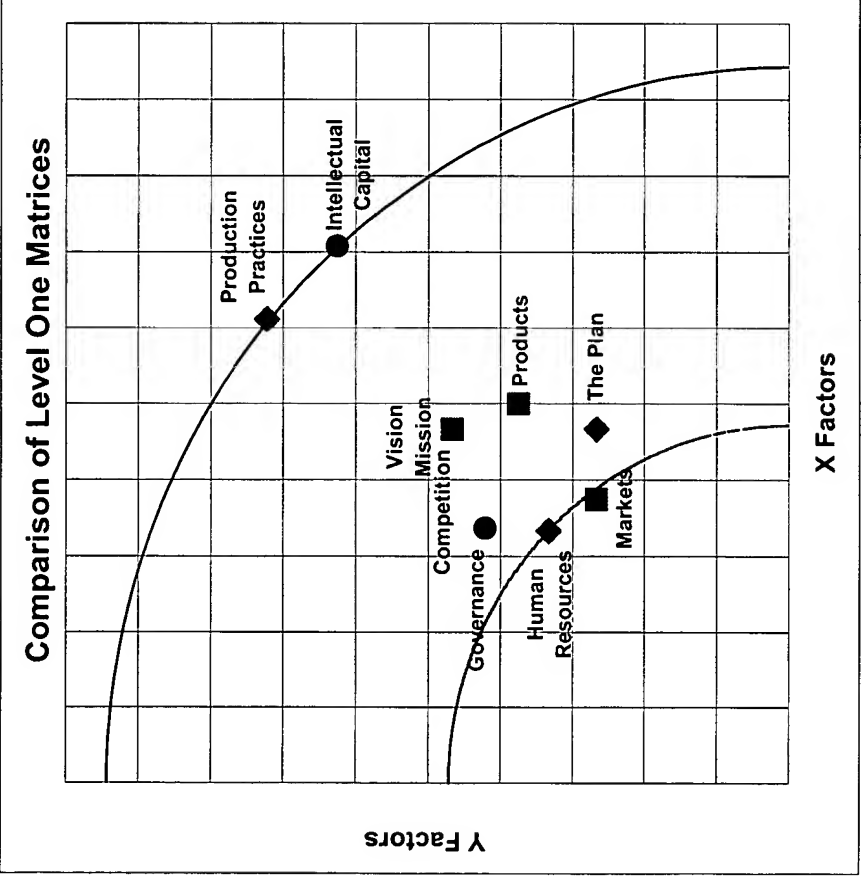


FIG. 20

1	2	3	4	5	6	7
Governance	Rating	Sc	X WT.	Y WT.	X	Y
Board of Directors	C	2	0.0	1.0	0.0	2.0
Shareholders	B	1	0.0	1.0	0.0	1.0
Management	B	1	0.0	1.0	0.0	1.0
Organization Struct	C	2	0.5	0.5	1.0	1.0
Succession Plan	A	0.1	0.5	0.5	0.1	0.1
Industry Relations	B	1	1.0	0.0	1.0	0.0
Public Relations	B	1	1.0	0.0	1.0	0.0
Environment	B	1	1.0	0.0	1.0	0.0
Total			4.0	4.0	4.1	5.1

For the Lower Matrix	X= Y= R=	3.4 4.2 38.1%	Axis Attribution	X= Y= H=	0.05 0.95 0.95
For the Upper Matrix	X= Y=	0.200 3.809		sin= cos=	0.999 0.053

FIG. 21

Comparison of Level One Performance  
Against Level Zero Variables

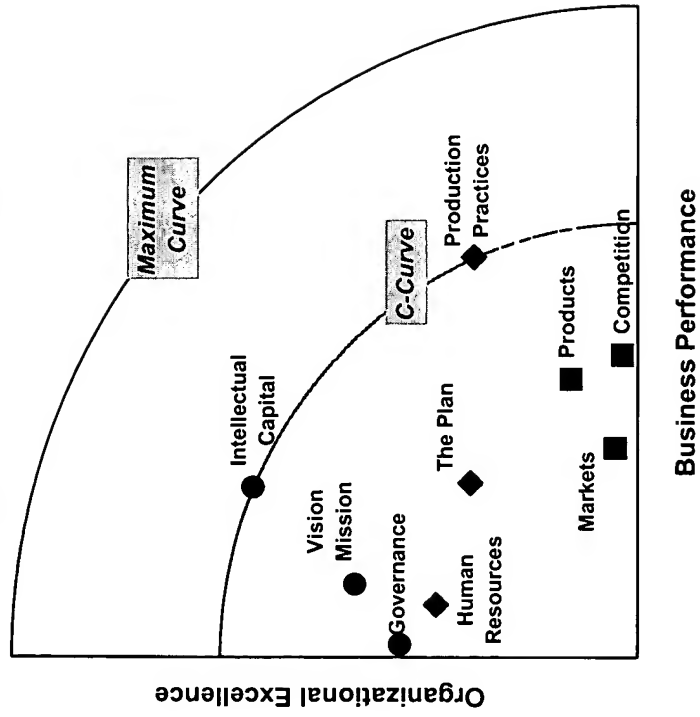


FIG. 22

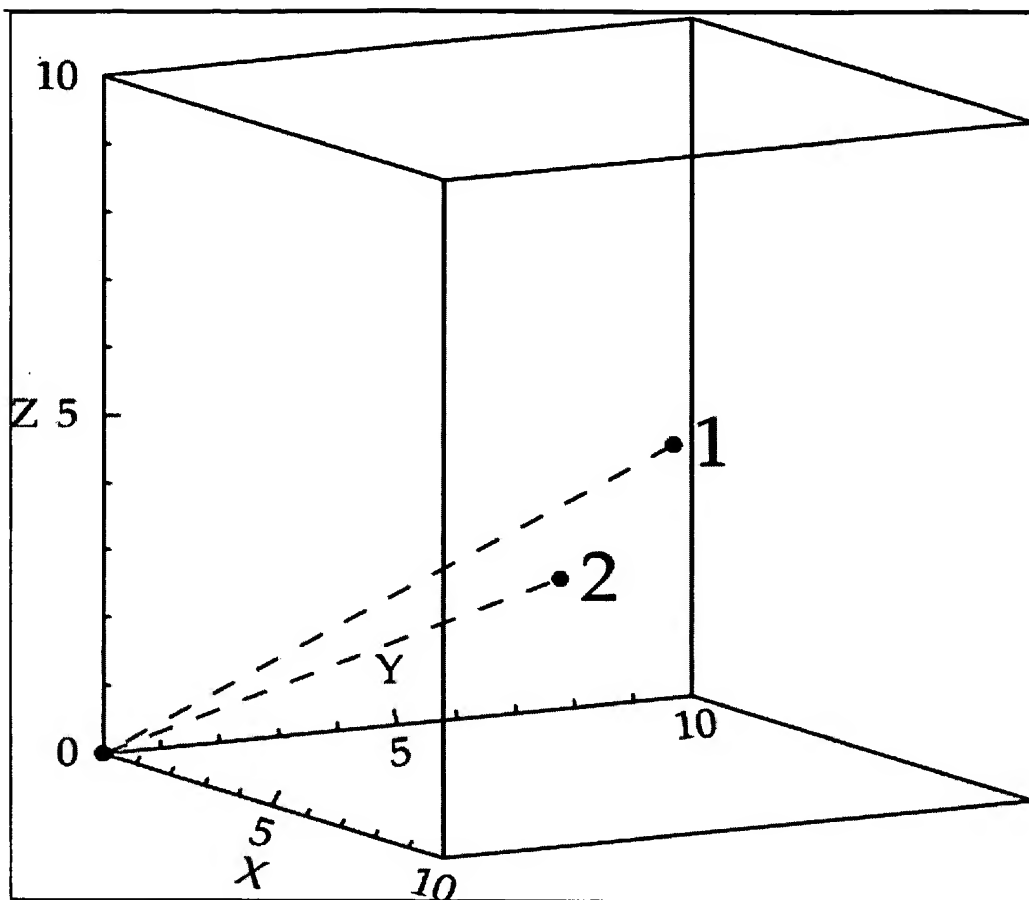
1	2	3	4	5	6	7	8	9	10
Performance Area-Technological Durability	Criteria	Letter Rating	Number Rating	X Wt.	Y Wt.	Z Wt.	X	Y	Z
	1	C	2	0.5	0.2	0.3	1	0.4	0.6
	2	D	3	0.2	0.8	0	0.6	2.4	0
	3	C	2	0.2	0.8	0	0.4	1.6	0
	4	B	1	0.2	0.7	0.1	0.2	0.7	0.1
	5	B	1	0.2	0.6	0.2	0.2	0.6	0.2
	Sum			1.3	3.1	0.6	2.4	5.7	0.9

X Plot = 6.2  
 Y Plot = 6.1  
 Z Plot = 5.0  
 R= 57.9%

Performance Area-Technological Durability	Criteria	Letter Rating	Number Rating	X Wt.	Y Wt.	Z Wt.	X	Y	Z
	1	B	1	0.5	0.2	0.3	0.5	0.2	0.3
	2	D	3	0.2	0.8	0	0.6	2.4	0
	3	C	2	0.2	0.8	0	0.4	1.6	0
	4	A	0	0.2	0.7	0.1	0	0	0
	5	B	1	0.2	0.6	0.2	0.2	0.6	0.2
	Sum			1.3	3.1	0.6	1.7	4.8	0.5

X Plot = 4.4  
 Y Plot = 5.2  
 Z Plot = 2.8  
 R= 42.2%

FIG. 23



**FIG. 24**